REMARKS

By virtue of this Amendment, claims 1, 38, 40 and 41 are amended to limit the water soluble pyrithione to sodium pyrithione. Support for the amendment can be found at page 18, line 13 to page 19, line 6 as well as Table 2 of the originally filed application.

Claims 1 and 38 have also been amended to clarify that the core consists essentially of a metal element or metal-containing compound. Support for the amendment can be found at page 17, line 21 and 22 of the specification.

No claims are added or deleted. After the Amendment, claims 1, 38, 40, 41, 50-52 are presented for further examination. Applicants respectfully submit that no new matter is added.

Rejections under 35 USC § 102/103

Claims 1, 38, 40, 41, 50-52 stand rejected under 35 USC 102(e) as being anticipated by or, in the alternative, under 35 USC 103 (a) as obvious US Patent No. 6,196,156 to Denesuk et al. as evidenced by US Patent No. 5,518,774 to Kappock et al. Applicants respectfully traverse the rejection for at least the following reasons:

Contrary to the assertion of the Office Action, Denesuk et al. does not disclose or suggest any composite particles containing a core of zinc silicate and a shell of zinc pyrithione.

Denesuk et al. is directed to a bedding article for a domestic animal containing an outer textile casing, an inner filing, and a microbe-inhibiting agent applied to at least one of the outer textile casing and the inner filing.

At columns 15 and 16, Denesuk et al. discloses literally hundreds of materials as suitable microbe-inhibiting agents for patentee's purposes. At column 16, lines 38-43, Denesuk et al. discloses one type of microbe-inhibiting agent as particulates containing "a core particle (zinc oxide, titanium oxide, or barium sulfate) over which is coated a microbe-inhibiting active layer (silver, copper oxide, and/or zinc silicate)." Denesuk et al. discloses further that "[a] barrier

layer (to control the rate of release of the active component) and a dispersion coating (to facilitate dispersion of the particles in host materials) are included on top of the active layer." See column 16, lines 43-46.

Zinc pyrithione was mentioned in passing by Denesuk et al. at column 17, line 60, Denesuk et al. in the section entitled "Compounds and Solutions with Selected Concentrations", along with many others, as a microbe-cidal chemical for use in the outer textile casing and inner filing of a bedding article for a domestic animal.

Nowhere does Denesuk et al. disclose or suggest that zinc pyrithione is a suitable material for a barrier layer or a dispersion coating for any particulates, much less the particulates disclosed at column 16, lines 40-43. Accordingly, it is respectfully submitted that Denesuk et al. does not disclose any particulates containing zinc silicate as a core material and zinc pyrithione as a shell material.

In addition, it is respectfully submitted that the zinc silicate/zinc pyrithione particulates allegedly disclosed by Denesuk et al., which applicants respectfully disagree, do not disclose or suggest any composite particles as recited in the instant claims for the simple reason that zinc silicate does not disclose or suggest zinc or zinc selenide, or any other non-zinc containing metal elements/metal-containing compounds recited in the Markush group of the core of the claimed composite particles.

Specifically, instant claim 1 recites a core "consisting essentially of a metal element or metal-containing compound selected from the group consisting of ....., zinc, zinc selenide ....." Accordingly, the claim language makes it clear that the material listed in the Markush group is either a metal element or a metal-containing compound. Since "zinc" is not a metal-containing compound, it clearly refers to a metal element. On the other hand, "zinc selenide", known as ZnSe, is a zinc-containing compound.

In contrast, zinc silicate, as defined by CONDENSED CHEMICAL DICTIONARY, refers to a compound having the formula Zn_2SiO_4. As such, it is apparent that zinc silicate is structurally different from and not suggestive of zinc or zinc selenide.

In this regard, Applicants respectfully disagree with the position taken by the Office Action at page 5, lines 7 and 8 that zinc silicate can be taken as providing the material consisting essentially of zinc metal. As defined by the dictionary, zinc silicate is a compound having the structure of Zn_2SiO_4. Accordingly, it is readily understood by a person skilled in the art that zinc silicate does not contain zinc metal nor zinc selenide.

Applicants respectfully submit that zinc silicate is different from, not suggestive of, and does not encompass the zinc metal nor the specific zinc selenide recited in the claims. Therefore, it is respectfully submitted that the alleged zinc silicate/zinc pyrithione particulates, which Applicants believe that Denesuk et al. does not disclose or suggest, do not disclose or suggest the instantly claimed composite particles. Accordingly, a withdrawal of the 103 rejection is respectfully requested.

Rejections under 35 USC § 112

Claims 1, 38, 40, 41, and 52 were rejected under 35 USC § 112, first paragraph, as allegedly failing to comply with the written description requirement. Specifically, the Office Action asserts that the specification as originally filed does not provide implicit or explicit support for performing a transchelation reaction of aluminum phosphate, bismuth oxide, iron II oxide, iron III oxide, silver, silver oxide, titanium oxide, zinc, zinc selenide, or zirconium oxide with potassium pyrithione.

To expedite the prosecution of the application, Applicants hereby amend the claims by limiting the transchelation to a reaction between the above-mentioned metal or metal-containing compound and sodium pyrithione. It is respectively submitted that the amended claims are supported by the originally filed application for example page 18, line 13 to page 19, line 6 as well as Table 2. Accordingly, withdrawal of the rejections is respectfully requested.

If the Examiner has any questions concerning this application, the Examiner is encouraged to contact the undersigned attorney.

Any fees due with this Reply may be charged to Deposit Account **23-1665** under Customer Number **27267**.

Respectfully submitted,
David Gavin et al.

Date: January 5, 2011

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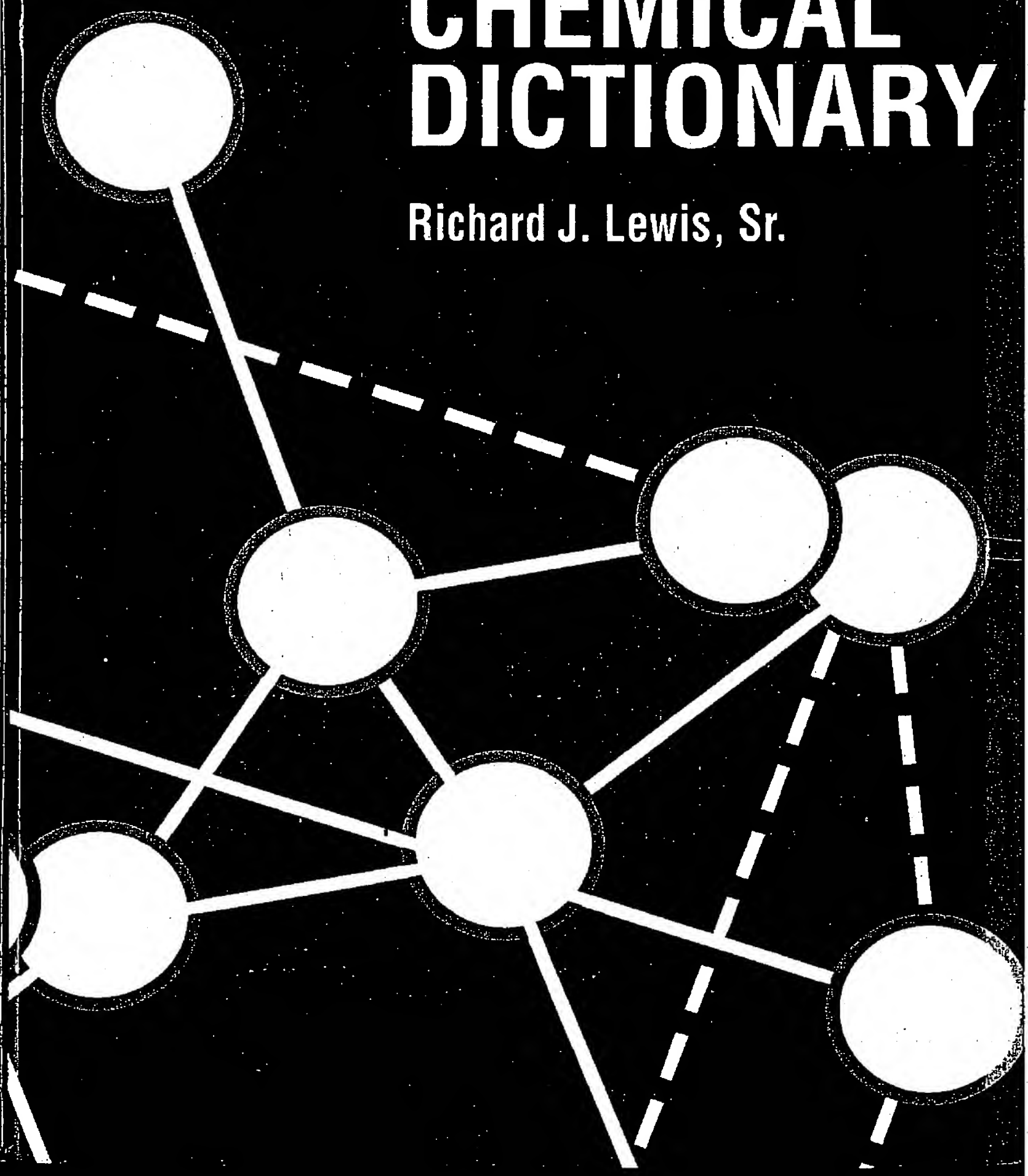
Twelfth Edition

CONDENSED CHEMICAL DICTIONARY

Richard J. Lewis, Sr.



Derivation: By dissolving zinc oxide in dilute propionic acid and concentrating the solution.
Use: Fungicide on adhesive tape.

zinc-1,2-propylene bisdithiocarbamate. See propineb.

zinc pyrithione. See "Zinc Omadine" [*Olin*].

zinc pyrophosphate. CAS: 7446-26-6.
$Zn_2P_2O_7$.
Properties: White powder, d 3.756 (23C), soluble in acids and alkalies, insoluble in water.
Use: Pigment.

zinc resinate.
Properties: Powder, clear amber lumps, or yellowish liquid; may be acid, basic, or neutral; soluble in some organic solvents (ether, amyl alcohol). Combustible.
Chief constituent: Zinc abietate.
Derivation: By fusion of zinc oxide and rosin, or by precipitation from solutions of zinc salts and sodium resinate.
Use: Wetting, dispersing, and hardening agent; drier in paints, varnishes, and resins.

zinc rhodanide. See zinc thiocyanate.

zinc ricinoleate.
$Zn[CH_3CH_2)_5CH_2OCH_2CH{:}CH(CH_2)_7CO_2]_2$.
Properties: Fine white powder with faint fatty acid odor, mp 92–95C, d 1.10 (25/25C). Combustible.
Use: Fungicide, emulsifier, greases, lubricants, waterproofing, lubricating-oil additive, stabilizer in vinyl compounds.

zinc salicylate. CAS: 16283-36-6.
$Zn[C_6H_4(OH)COO]_2 \cdot 3H_2O$.
Properties: White crystalline needles or powder; soluble in water and alcohol. Combustible.
Derivation: By heating zinc hydroxide and salicylic acid.
Use: Medicine (antiseptic).

zinc selenide. CAS: 1315-09-9. ZnSe.
Properties: Yellowish to reddish crystals, d 5.42 (15/4C), mp above 1100C, insoluble in water.
Hazard: Fire risk in contact with water or acids.
Use: Windows in infrared optical equipment, phosphor.

zinc silicate. (zinc orthosilicate).
CAS: 13597-65-4. Zn_2SiO_4.
Properties: White crystals, d 4.103, mp 1509C, insoluble in water.
Use: Phosphors, spray ingredients, to remove traces of copper from gasoline.
See also willemite.

zinc silicofluoride. See zinc fluorosilicate.

zinc-silver oxide battery.
Primary or secondary battery used where space and weight are critical, i.e., in missiles. The battery has large energy output for its weight, but the components are expensive and the cycle life is short. To avoid deterioration, potassium hydroxide electrolyte is added just before use.
See also battery.

zinc stearate. CAS: 557-05-1. $Zn(C_{18}H_{35}O_2)_2$.
Percentage of zinc may vary according to intended use, some products being more basic than others.
Properties: (pure substance) White, hydrophobic powder free from grittiness; faint odor; d 1.095; mp 130C; soluble in acids; soluble in common solvents when hot; insoluble in water, alcohol, and ether. Combustible.
Derivation: Action of sodium stearate on solution of zinc sulfate.
Grade: USP, technical, available free from chick edema factor.
Use: Cosmetics, lacquers, ointments; dusting powder, lubricant, mold-release agent, filler, anti-foamer, heat and light stabilizer, medicine (dermatitis), tablet manufacture, dietary supplement.

zinc sulfate. (white vitriol; white copperas; zinc vitriol). CAS: 7733-02-0. $ZnSO_4 \cdot 7H_2O$.
Properties: Colorless crystals, small needles, or granular, crystalline powder without odor; astringent, metallic taste; efflorescent in air; solutions acid to litmus; d 1.957 (25/4C); mp 100C; loses $7H_2O$ at 280C; soluble in water and glycerol; insoluble in alcohol.
Derivation: (1) Roasting zinc blende and lixiviating with subsequent purification, (2) action of sulfuric acid on zinc or zinc oxide.
Grade: Technical, USP, reagent.
Use: Rayon manufacture, dietary supplement, animal feeds, mordant, wood preservative, analytical reagent.

zinc sulfate monohydrate. $ZnSO_4 \cdot H_2O$.
Properties: White, free-flowing powder; soluble in water; insoluble in alcohol.
Use: Rayon manufacture, agricultural sprays, chemical intermediate, dyestuffs, electroplating.

zinc sulfide. CAS: 1314-98-3. ZnS. Exists in two crystalline forms, α (wurtzite) and β (sphalerite).
Properties: Yellowish-white powder, stable if kept dry. α: d 3.98. β: d 4.102, changes to α form at 1020C. Sublimes at 1180C, soluble in acids, insoluble in water.
Derivation: By passing hydrogen sulfide gas into a solution of a zinc salt.